

NOTES ON ARKANSAS TRUXALINÆ.

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This subfamily is rather poorly represented in Arkansas, only eight of the thirty-one genera recognized by me as occurring in North America having been found within its borders, and only one genus, *Orphula*, is represented by more than a single species.

Mermiria rostrata, McNeill.—Has not been found in the State, but its occurrence at Mackay, I. T., makes it altogether probable that it belongs to our fauna.

Truxalis brevicornis, Linn.—Occurs in the central part of the State, but has not yet been found in the mountainous Northwest.

Errittix virgatus, Scudd.—This species must be said to be rare. I have found it nowhere in the State except in a few localities about Fayetteville. It is probably the first Orthopteron which reaches maturity in the spring. As early as April fourth there were no pupæ to be found.

Syrbula admirabilis, Uhler.—This is a southern form, and by far the most common of the Truxalinæ. It is abundant in old pastures. It reaches maturity about the first of July. Brown females are much less common than brown males, but they are not rare.

Chloealtis conspersa, Harr.—An uncommon species, so far as my observation goes. It is represented in my collections from Arkansas by a single pair (male and female) of adult specimens and by three pupæ. These specimens were all taken early in July, and they were always found about the head of wooded ravines in north-west Arkansas. When compared with Illinois specimens these are seen to be larger, the male measuring 25 mm. The female is noticeably different from northern specimens in having the tegmina subacute and the sides of the head, pronotum and abdomen black or very dark fuscous. In the young the antennæ are more distinctly flattened basally than in the adult.

Dichromorpha viridis, Scudd.—This species is widespread, though nowhere abundant, and scarcely common. The brown is about as common as the green variety amongst the females.

Orphula pelidnus, Burm.—This species is the commonest *Orphula* in the State, though it is not abundant or scarcely common in the north-west. In the central and southern parts of the State it is abundant.

Orphula speciosa, Scudd.—This species is much more uncommon than I had formerly supposed. I have found it in a few widely scattered localities only.

Orphula decora, McNeill.—No other specimens have been found since the single one, on which the species is based.

Boopedon auriventris, n. sp.

Vertex prominent, declivent, convex, not separated from the front by distinct carinæ, not forming an angle with the front, but united with it in a curve, as wide between the eyes as the long (female) or short (male) axis of the eye; foveolæ of the vertex entirely wanting (female) or barely discernible (male); foveolæ of the tempora obsolete or represented by punctate areas, plainly visible from above; front moderately inclined, the costa broad, with the sides generally parallel, half as wide as the space between the eyes, convex, suddenly constricted just above the antennæ, vanishing much before the clypeus; antennæ filiform, yellowish at the base, beyond usually much infuscated, longer (female) or much longer (male) than the head and pronotum. Disk of the pronotum subtectiform; posterior margin straight, sides constricted, especially at the first sulcus; median carina strong, percurrent, cut much behind the middle by the principal sulcus; lateral carinæ obsolescent, more distinct in the male, especially on the anterior part of the progone; lateral lobes arcuate dorsoventrally narrow, a little wider (deeper) than long, with the posterior margin perceptibly more oblique than the anterior, the lower margin very obtusely angulate. Space between the mesosternal lobes strongly transverse, that between the metasternal lobes linear, with a deep sulcus on either side (male) or slightly transverse (female), with equally deep sulci. Tegmina not exceeding half the length of the abdomen, ovate, rounded at the tip (male) or subacuminate (female). Posterior femora long, moderately slender, banded above and on both outer and inner surfaces (male) or bands more or less completely obsolete (female). Posterior tibiæ red at least on the distal half, basally frequently lighter, with more or less distinct infuscations near the middle and at the extreme base; apical spines on the inner side very unequal, the longer about equalling in length the terminal joint of the tarsus with its claws. Ovipositor nearly included. Colour very variable, either nearly uniform fuscous-brown or testaceous, with a more or less distinct olive tinge, enlivened with variable fuscous markings; in the lighter specimens there is a fuscous stripe just below and parallel to the tempora, preceded by a light yellow stripe; the sides of the head have a broad fuscous stripe reaching from the upper posterior margin of the eye to the pronotum, broadening rapidly; the lateral lobes of the pronotum are typically infuscated except

for a narrow anterior and a broad posterior band; the abdomen has a series of large quadrate fuscous spots along the sides (female) more or less replaced by bright red (male); the dorsal surface of the abdomen and less frequently the disk of the pronotum and the top of the head are bright yellow or brownish-testaceous; ventral surface of the abdomen more or less distinctly yellow, with the last two segments in the male red. Length: male, 22 mm.; female, 38 mm.; tegmina: male, 7 mm.; female, 9½ mm.; hind femora: male, 15½ mm.; female, 23½ mm. Fourteen adult males, twenty adult females, seven pupæ, from the summit of Sulphur Springs Mountain, on the line between Boone and Newton counties.

This species is so different in the position of the principal sulcus of the pronotum and in the character of its posterior margins from the other species of *Boopedon* as to perhaps deserve to constitute a genus by itself. Its occurrence is quite remarkable. Sulphur Springs Mountain stands probably as much as a thousand feet above the valley, and with the exception of two or three neighbouring mountains, it decidedly overtops all the surrounding country. This mountain is a high ridge, probably one and a half miles long at the summit. At either end there are considerable prominences, composed of massive millstone grit. One of these is surrounded by cliffs on all sides, so that the top can be reached with some difficulty; the other has the cliffs broken down in places, so that its summit is much more readily accessible. On both of these a tall coarse grass grows luxuriantly, and among this grass this species was found in abundance over the few square yards of the least accessible peaks. A single male was found on the other peak. As several days were spent in collecting in this vicinity, and as particular pains were taken to secure all the specimens possible, and since no other specimens have been found elsewhere, though seven weeks were spent in the summer of 1897 by the writer and a party of three others in collecting in Northwestern Arkansas, it is reasonable to conclude that this species is an old resident which has inhabited the country since the times when the Ozark plateau was a level plain. As erosion carved out the valleys, the level surface was more and more restricted in areas until at the present time it is represented by the summits of the highest mountains. In this way *auriventris*, which is a grass-loving prairie species, has been hemmed in by the encroaching forests until it now maintains a precarious foothold on a few isolated mountain summits. Under such circumstances wings would be a disadvantage, so they have been shortened by natural selection.